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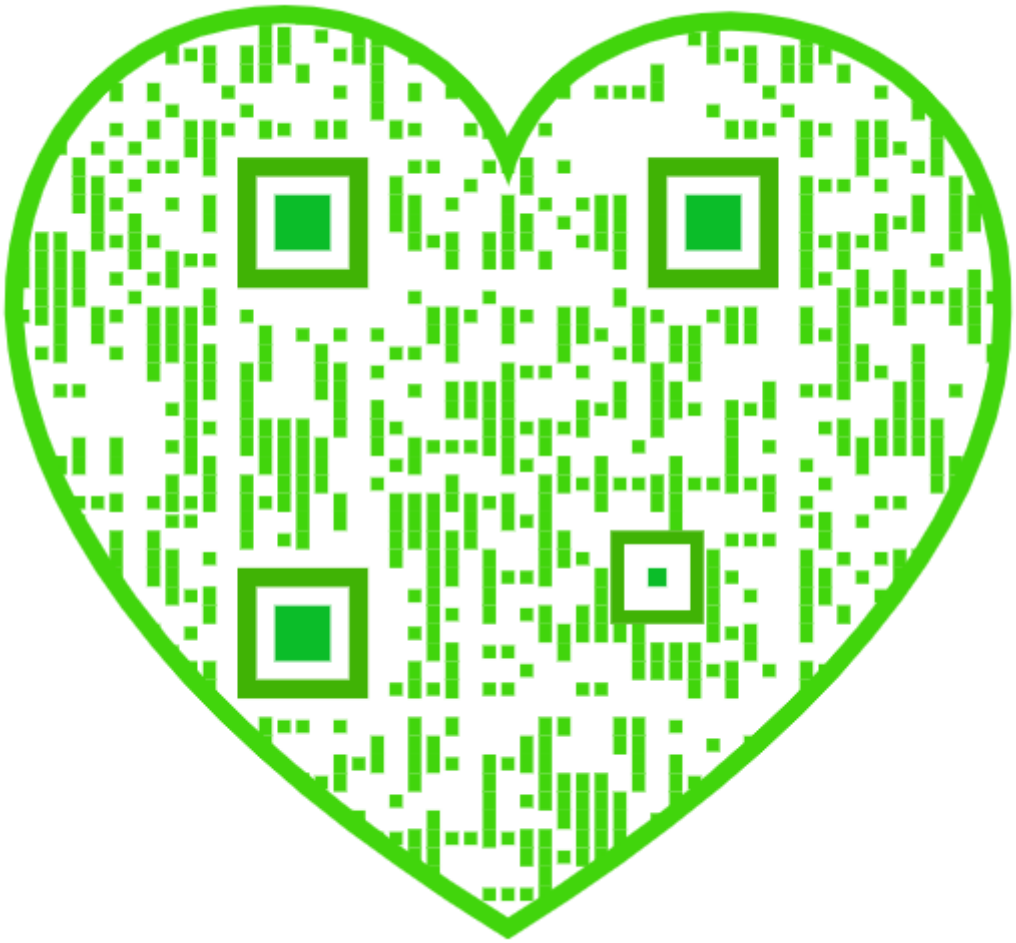

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THE SCIENTIFIC SYSTEM

OF

DRESS CUTTING

BY

NELLIE HAMILTON.

The Scientific System

OF

Dress Cutting

INVENTED BY

Nellie Hamilton

OF ALGONA, KOSSUTH COUNTY, IOWA,

1894.

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1894.

The Scientific System of Dress Cutting.

In commending the **Scientific System of Dress Cutting** to the public, it might be well said that it is **reliable, easily comprehended**, and **adjustable** in all its parts. By its use an easy, graceful fitting dress is obtained; further, a practical knowledge of the art of dress cutting.

For drafting the patterns the necessary tools are the common square, tape line, paper and pencil. The measurements must be correctly taken to insure a good fit—neither slack nor tight, but as they actually are.

The figures and letters to the right of rules are placed there merely for convenience, that any point or line may be referred to at ease.

These are the sample measurements that have been used in the following plates:

Bust,	33	Height of dart,	5¼
Waist,	25	Hip,	36
Length of waist,	15½	Hip dart,	2
Width of back,	11¾	Length of sleeve,	17
Under arm,	7¼	Elbow to wrist,	9½
Width of chest,	12	Elbow,	10½
Neck,	12	Elbow base,	2½
Base of neck,	14	Size of hand,	8
Length of point,	18½	Length of skirt,	40

Directions for Taking the Measures.

BUST—Measure over fullest part of bust, just under shoulder blades, or straight around.

WAIST—Around smallest part of waist.

LENGTH OF WAIST—From prominent bone at back of neck to waist line, or bottom of waist.

WIDTH OF BACK—From the shoulder seam at arm's eye, straight across.

UNDER ARM—Directly under arm to bottom of waist.

WIDTH OF CHEST—From the narrowest part of chest straight across.

NECK—Around neck at the middle, a little easy.

BASE OF NECK—Around neck at its base.

LENGTH OF POINT—From prominent bone at back of neck over shoulder to bottom of waist in middle of front.

HEIGHT OF DART—From waist line to fullest part of bust, or a little below.

HIP—Around fullest part of hip, a little easy.

HIP DART—Place the tape just under the arm and bring the line down to the fullest part of the hip; the space between the tape and the waist line will give half the width of the dart.

LENGTH OF SLEEVE—From the arm's eye, on the inside seam of sleeve, to a point even with the prominent wrist bone.

ELBOW TO WRIST—From the elbow point to the prominent wrist bone.

ELBOW—Pass the tape around elbow, with the arm straight; then bend the arm, taking the measure over the elbow point.

ELBOW BASE—Place tape in same position as for elbow measure, but bring it straight around the arm above, instead of over, elbow; when the arm is bent square, the distance from the elbow point directly above to the tape line will give the elbow base.

SIZE OF HAND—Around hand, over knuckles and thumb.

LENGTH OF SKIRT—From waist to floor at greatest length; take one inch from this measure, for slender people.

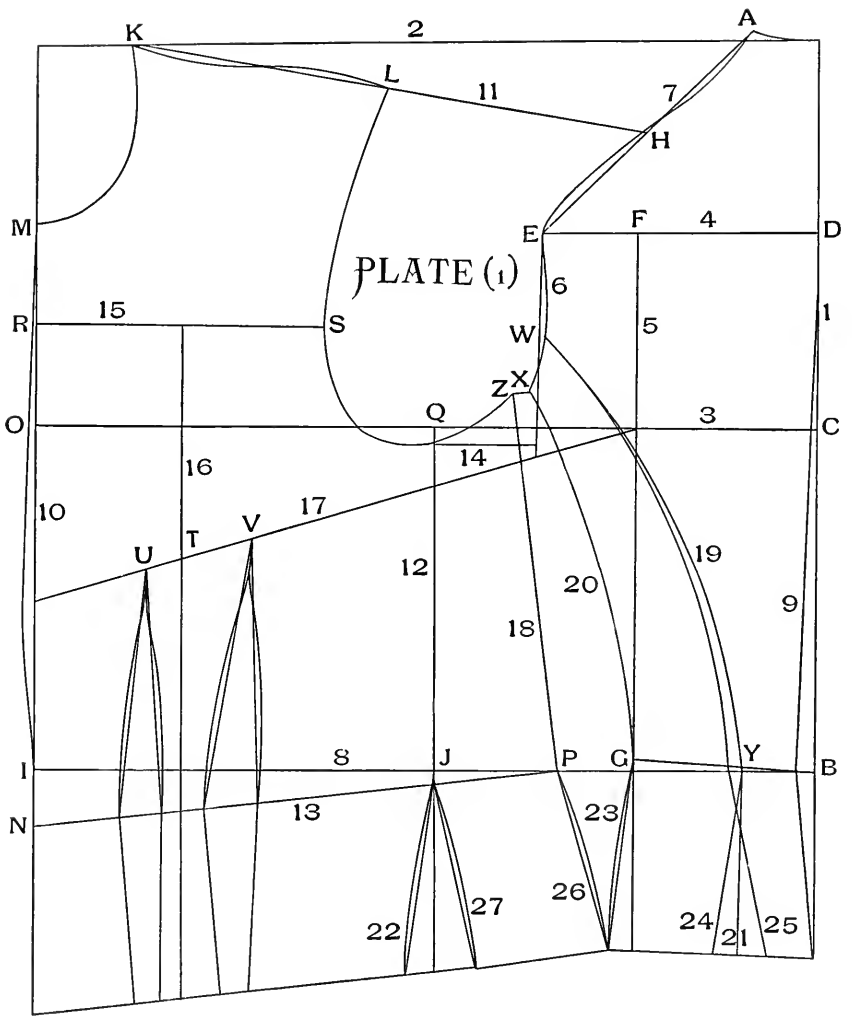
PLATE (1)
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Rules for Drafting Plate 1.

1, 2 Draw line 1, the length of the long arm of square; and line 2, the length of the short arm of the square.

A Make dot A, ⅛ of the neck measure from line 1.

B Make dot B, length of waist measure from line 2.

C Make dot C, the under arm measure from dot B, and draw line 3
3 the length of the short arm of the square. Line 3 should be a little below the middle of length of waist.

4 Line 4 is midway between lines 2 and 3, and is ½ the width of back measure. By raising this line, the arm's eye will be enlarged in the same degree.

D E Make dots D and E as indicated.

F Make dot F ⅓ of the distance from dot E to line 1.

5 G Draw line 5, as indicated, and make dot G.

6, 7, H Draw lines 6 and 7, as indicated, and make dot H midway between dots A and E.

8 Draw line 8 from dot B, on the long arm of the square, and make
I dot I at ½ the bust measure from line 1.

9 Draw line 9, ¼ to ½ inch, inside line 1, as indicated.

J Dot J is midway between dots B and I.

10 Draw line 10, as indicated, on the long arm of the square, and
K extend line 2 to line 10, and make dot K one and ⅓ the distance between dot A and line 1, from line 10 on line 2.

11, L Draw line 11, as indicated, and make dot L the length of back shoulder, less ½ inch from dot K, on line 11. With the tape line, measure the distance between dot A and line 1, place this measure at dot K, and bring ½ the neck measure to line 10, in
M a curve, as indicated, and make dot M. With the back neck measure still at dot K, carry the tape down to line 10, until the
N length of point measure is reached, and here make dot N.

12 Draw line 12, as indicated, on the long arm of the square and
O extend line 3 to line 10, and make dot O. Measure with the tape line the distance from dot G to line 9; place this measure at dot J and measure on line 8, toward dot G, till ¼ the waist
P measure is reached, and here make dot P.

13 Draw line 13, as indicated.

Q Make dot Q, the under arm measure from line 13.

14 Draw line 14 as indicated.

15 Draw line 15, the width of chest measure, midway between dots
R, S M and O, and make dots R and S, as indicated. Curve the arm's eye as indicated.

16 Line 16 is midway between dots R and S.

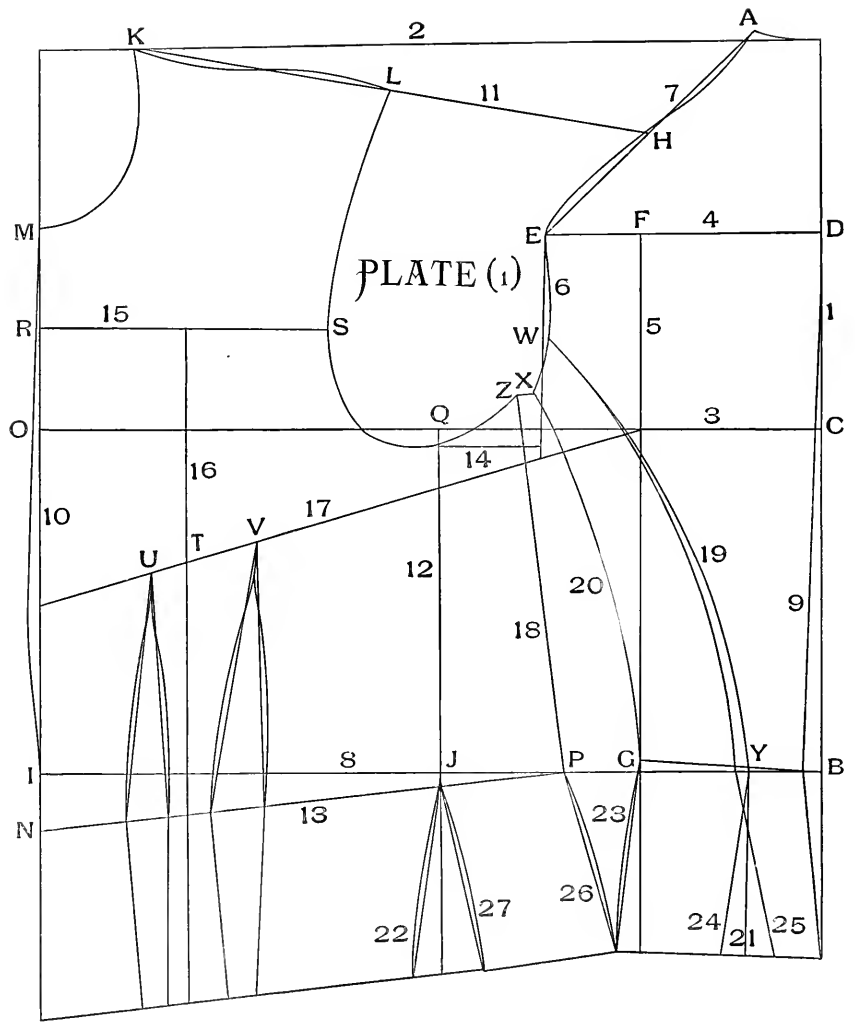
PLATE (1)
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Rules for Drafting Plate 1.—Continued.

T Make dot T at the height of dart measure, from line 13, on line 16. Measure line 13 from dot J to dot N; the difference between this measure and ¼ of the waist measure will give the amount of space for the darts. The first dart, toward line 10, should be rather smaller than the second. The distance between the darts at the waist line should be from ¾ to 1 inch wide.

17 Draw line 17 as indicated.

U, V Make dot U ¼ of the distance from dot T to line 10, and dot V twice the distance from U to T, from line 16. Draw darts, as indicated, which should flare less below the waist line than above.

W Make dot W ⅓ of the distance from dot E to dot Q.

X, Y Make dot X, as indicated; also dot Y. These three points, W, X, Y, may be changed to suit the fancy. Measure from dot C, on line 17, to line 10; the difference between this measure and ½
Z the bust measure gives the distance from dot X to dot Z.

18 Draw line 18 as indicated. Pin the end of the tape line over into a loop, measure three times line 4 on the tape line from the loop, insert pencil through the loop, and with the thumb and finger
19 at the measurement just taken, draw curved line 19, as
20 indicated. Measure four times line 4 and draw line 20 in the same manner. These lines can be curved to suit the fancy, by shortening or lengthening the tape line. The difference between lines 18 and 20 in length, take off on line 20 at waist line, as indicated.

21 Line 21 is perpendicular.

22, 23, 24, 25 Lines 22, 23, 24 and 25 are ½ inch from lines 12, 5 and 21, at the bottom of the draft, which indicates the fullest part of the hip, and is four or five inches below the waist line for adults.

26, 27 Line 26 touches line 23, and line 27 is on the same slant.

Test the bottom of the draft by the hip measure, and increase or diminish if required.

Curve lines as indicated.

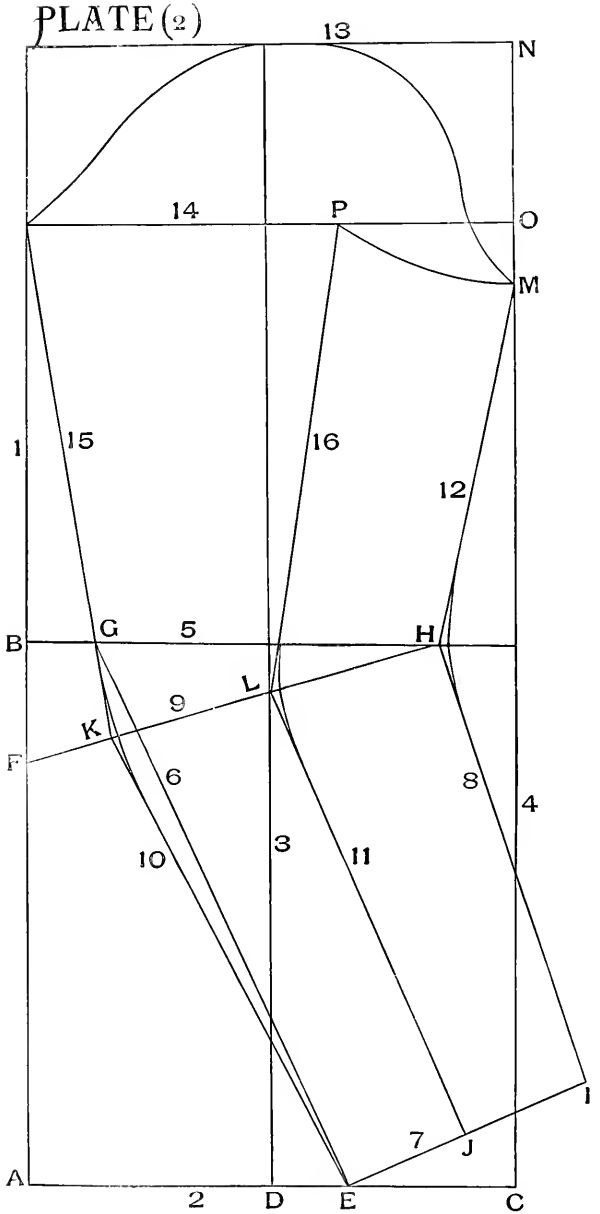
Should it be desired that the hip dart be discontinued below the hip, lines 22 and 27 should be equal distance from line 12.

For stout people it is well to put in an extra piece under the arm, similar in shape to the one in draft, except that it is straight across top and flares less at hip.

Insert this piece at line 12. (This may also be done when a dress cannot be let out.)

Or should the under arm piece seem a little too broad at waist line, tip line 12 toward dot P a trifle; and for stout people it is well to extend the side body, at line 19, beyond the arm's eye, that the form may be taken in at that point.

PLATE (2)



Rules for Drafting the Sleeve.—Plate 2.

1, 2 Draw line 1 the length of the long arm of the square, and line 2 the length of the short arm.

A, B Make dot A, as indicated, and dot B, the elbow to wrist measure, plus ⅔ of elbow base measure from dot A.

C Make dot C ⅔ of the arm's eye measure (of waist draft) from dot A. To increase the size of sleeve above the elbow, increase the arm's eye measure.

D Make dot D midway between dots A and C.

E Make dot E ⅔ of elbow measure from dot A.

3, 4 F Draw lines 3 and 4 on the long arm of the square, and make dot F the elbow base measure from dot B.

5, G, H Draw line 5, and make dots G and H ⅓ of the elbow measure from line 3, making the space between G and H ⅔ of elbow measure.

6 Draw line 6 on the long arm of the square, and line 7 on the short arm, which must be squared or at right angles with line 6.

I Make dot I ⅔ of hand measure from dot E, and make dot J midway between dots E and I.

J, 8, 9 K Draw lines 8 and 9 as indicated, and make dot K ⅔ of elbow measure from dot H.

L Make dot L midway between dots H and K.

10, 11 Draw lines 10 and 11.

M With the tape line measure line 8 from I to H; from dot H carry the tape line to line 4 till the length of sleeve measure is reached and here make dot M.

12, N Draw line 12 and make dot N ⅓ of arm's eye measure from dot M.

13, O Draw line 13 and make dot O ¼ of the distance from M to N.

14, P Draw line 14 and make dot P ⅓ of elbow measure from dot O.

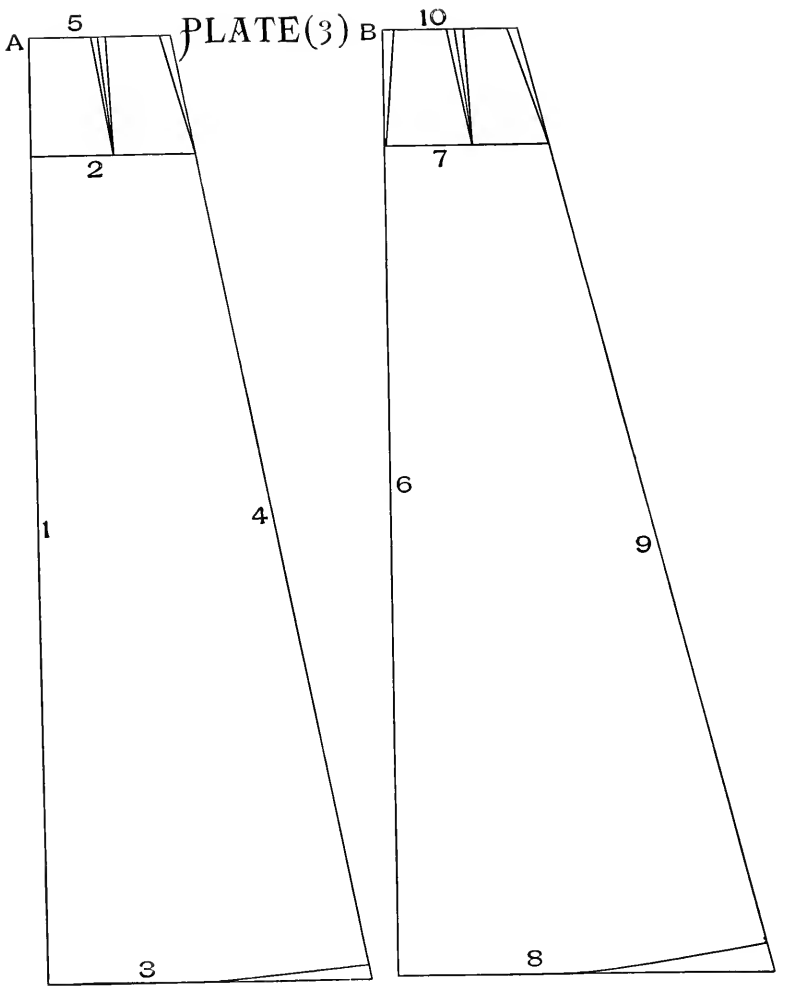
15 Draw lines 15 and 16.

16 Curve the top of sleeve and elbow lines as indicated.

The upper side of this sleeve gathers slightly either side of dot L. If this is not desired, dot K must be the same distance as dot L below line 5, and line 10 must be shortened at the wrist to the length of line 11.

To cut a full sleeve pattern, fold the paper the width desired for sleeve, lay plain sleeve down with line 4 straight with the edges of paper; trace the inside seam and top of upper side to line 3 and the top of under side; unfold the paper and draw curved line from under portion to the upper; bring the sleeve down longer at back of wrist, to make room for elbow to bend. This sleeve is usually cut a little higher on upper side at top.

PLATE(3)



Rules for Drafting the Three-Gored Skirt.—Plate 3.

THE FRONT GORE.

1 Line 1 is the length of the skirt.

2 Line 2 is four inches from dot A, and is ¼ of ¾ of the hip measure.

3 Line 3 is twice the length of line 2.

4, 5 Draw line 4, then line 5 square with line 1. Measure on line 4, from line 5, the length of skirt, and curve line 3 to this measurement. Now draft the side gore before finishing the front.

THE SIDE GORE.

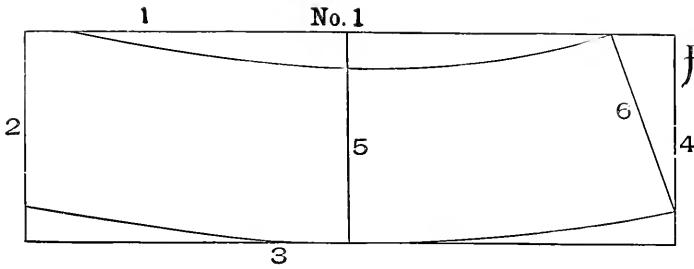
6, 7 Line 6 is length of skirt; line 7 is four inches from dot B, and is ¼ of ¾ of the hip measure.

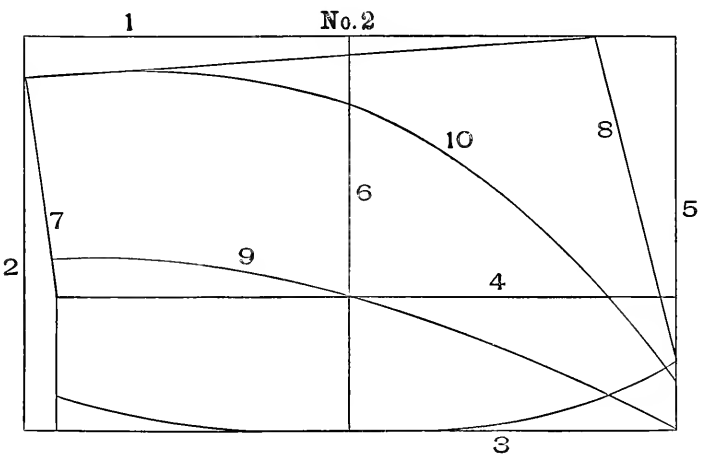
8 Line 8 is twice and ⅓ the length of line 7.

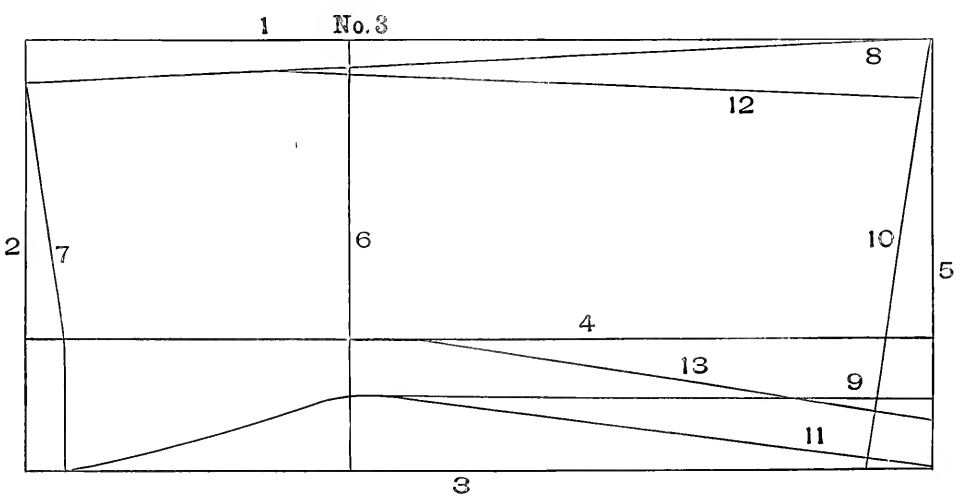
9, 10 Draw lines 9 and 10. Measure on line 9, from line 10, the length of skirt and curve line 8 to this measurement.

The difference between the sum of the length of lines 5 and 10, and ⅜ of the waist measure, will give the amount to be taken off from the sides of the gores (above the hip lines) and in darts. Take off half this amount equally at the sides, as indicated, and half in equal darts. Draw lines through the center of waist and hip lines, for dart spaces. Draw the darts and then slope the sides. The back of the skirt is straight and needs no drafting. If the skirt measure is not the same in length all around, make the changes at the top, keeping the hip lines parallel with the waist lines and lines that go together, of the same length.

PLATE (4)







Rules for Drafting Collars—Plate 4.

THE STANDING COLLAR, NO. 1.

1 Draw line 1 half the base of neck measure.

2 Line 2, the height of collar, plus ¼ inch. Line 5 is ¼ the base of neck measure from line 2. Measure on line 1, ½ the neck
6 measure from line 2, and from this measurement draw line 6. Curve lines 1 and 3, ¼ inch. Line 2 is the back.

THE COAT OR TURN-OVER COLLAR, AND THE FLARING STANDING COLLAR, NO. 2.

1 Draw line 1 the length desired for back of coat collar, or base of neck measure, for common turn-over collar.

2 Draw line 2 the width of the collar.

4 Draw line 4 the height desired for turn-over line, from line 3.

6 Draw line 6, ¼ of base of neck measure, from line 2.

7 Draw line 7 ¼ inch inside line 2, at lines 3 and 4.

8 Curve lines 1 and 3 and draw line 8 to suit the fancy in regard to slope; it represents half the niche in the coat collar, the other half being made by the turned back front of the jacket or waist, which should be stiffened and faced as far back of the turn-over line as 1 or 2 inches.

The standing flaring collar is enclosed by lines 7, 9 and 10.

When drafting this collar, line 1 is base of neck measure, and the length of line 2 will indicate the degree of flare. Line 9 must touch line 3, and must be in length ½ the base of neck measure.

TURN-OVER COLLAR FOR SQUARE OR V-SHAPED NECKS IN FRONT, NO. 3.

1, 2 Draw line 1 the length desired for collar, and line 2 the width desired.

Draw lines 3, 4, 5, 6, 7 like the coat collars.

9, 10 Draw line 9, as indicated, and line 10 square or sloping, to suit the fancy.

For V-shaped neck, change the front of lines 8, 4 and 9 to 12, 13 and 11. Lines 4 and 13 are the turn-over lines. For a turn-over collar that does not stand up in back of neck, trace from the neck of waist when lain flat. Cut the lining and stiffening of the collar like the draft, except that an allowance for ¼ inch seam must be made for turn-over collars in back of neck. Cut the outside ¾ inch larger than draft all around, except for seam in back; baste all together, then hem-stitch the outside to the lining and cut the outside corners off in the shape of a half square, within ¼ inch of the collar. Allow of the outside material on the base neck lines for facing, diagrams No. 3. Sew the other collars in without facing or finish, and baste in on the outside. Before sewing in a turn-over collar, crease the collar at the turn-over line and trim the base neck lines even. Never sew stiffening into a seam.

Rules for Tracing.

Trace all around the forms.

Where there are straight and curved lines together, trace the curved lines only.

Trace line 13 of the waist for the waist line, and line 9 for middle of the back.

To trace the hip dart of waist, when the under arm portion and front are to be in one piece, trace both lines 8 and 13 through to dot G, trace lines 12 and 27; now move the pattern on the traced line 8 till line 22 touches line 27, at bottom of draft; now trace line 12 and line 22, and finish tracing the under arm portion.

Rule for Cutting.

Allow for all seams *except* at arm's eye, neck, and top and bottom of sleeve and skirt.

Rules for Basting.

Baste the lining to the outside on all tracings.

Baste $\frac{1}{4}$ inch outside the tracing in the front of waist for lap.

Baste the darts from the top down.

Keep the waist lines together, except at the darts.

Full the back shoulder to the front shoulder.

To baste sleeve, baste the inside seam first; then the upper portion of the back seam to line 5 of the under side; now baste from the wrist toward the elbow, until an equal space is reached from line 9 of under side; full the upper side to this space.

To baste the sleeve in, place dot M midway between dots S and Q of the waist.

It is not necessary to further delineate how to trace, cut and baste. Any one with ordinary intelligence will know the rest.

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